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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,871	08/03/2001	Arie Cornelis Besemer	B041745JGD/S	5309

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[REDACTED] EXAMINER

MAIER, LEIGH C

ART UNIT	PAPER NUMBER
1623	9

DATE MAILED: 02/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No. <b>09/830,871</b>	Applicant(s) <b>Besemer</b>
Examiner <b>Leigh Maier</b>	Art Unit <b>1623</b>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 31 MONTH(S) FROM LCM 2-21-03 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1)  Responsive to communication(s) filed on \_\_\_\_\_.
- 2a)  This action is **FINAL**.      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

### Disposition of Claims

- 4)  Claim(s) 15-29 is/are pending in the application.
- 4a) Of the above, claim(s) 22-29 is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 15-21 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12)  The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13)  Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some\* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a)  The translation of the foreign language provisional application has been received.
- 15)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1)  Notice of References Cited (PTO-892)      4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)      5)  Notice of Informal Patent Application (PTO-152)
- 3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3      6)  Other:

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## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Group I, claims 15-21 in Paper No. 8, filed December 4, 2002, is acknowledged. The arguments presented in the traversal appear to be twofold. First, Applicant contends that the international examiner found no lack of unity, so the USPTO cannot now contend the examination of the pending claims in the present application would present an undue searching burden. Second, Applicant contends that the references relied upon in the finding of lack of unity do not disclose the instant products. The traversal is not found persuasive.

A finding of lack of unity is made at the discretion of the examiner. The present examiner cannot speak to actions of the international examiner. At the National Stage, the sole criterion in a finding of lack of unity is no novel special technical feature uniting the inventions, not a burdensome search.

Regarding the references used in the finding of lack of unity, Applicant contends that LEROY makes it clear that the aldehyde groups only result from starch *derivatives*, having hydroxyl-containing side-chains. Applicant points to col 4, lines 36-40. It is noted that this passage refers to the second embodiment of the invention. Immediately before this passage, col 3, lines 1-29, the first embodiment, the oxidation of starch, *per se*, is discussed. As set forth in the

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finding of lack of unity, Tables I and II, (data from examples I and II) disclose starch oxidation products having the required aldehyde/carboxylate ratios.

The requirement is still deemed proper and is therefore made FINAL. As such, claims 22-29 are withdrawn from consideration.

***Claim Rejections - 35 U.S.C. § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15-19 are rejected under 35 U.S.C. 102(b) as being anticipated by LEROY et al (US 3,553,193).

LEROY disclose starch oxidation products having a ratio of aldehyde and carboxyl groups required in claim 15. Regarding claims 16-18, attention is drawn to the product in Table I at pH 10.0, at 0°C. This product has an approximate 50/50 ratio of aldehyde and carboxyl groups. Therefore, for every oxidized 1,2-dihydroxyethylene unit, the product contains about 1 aldehyde and 1 carboxyl group.

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Claims 15 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by BATTISTA et al (US 3,111,513).

BATTISTA teaches the preparation of oxidized cellulose derivatives having both aldehyde and carboxyl groups. See examples 2-5 and col 5, lines 32-65. The reference is silent regarding the ratio of these groups. However, given the range recited in the claims, from predominantly carboxyl, to predominantly aldehyde, it appears that the products would fall into this range. Since the Office does not have the facilities for preparing the claimed materials and comparing them with prior art inventions, the burden is on Applicant to show a novel or unobvious difference between the claimed product and the product of the prior art. See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980).

#### ***Claim Rejections - 35 U.S.C. § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

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claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 15 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over SMITS et al (WO 96/01849) and LEROY et al (US 3,553,193).

SMITS teaches the preparation of a fractionated polydisperse carbohydrate composition. See the abstract and pages 28-29. In preparing this product the reference teaches the use of chemically modified inulin (2,1-fructan) that may be prepared from oxidized inulin, resulting in aldehyde and/or carboxyl functions at C2 and C3. See page 30, lines 16-36. The reference contemplates the use of oxidized inulin having both aldehyde and carboxyl groups. The reference is silent regarding the ratio of these groups.

LEROY teaches as set forth above. The reference teaches the oxidation using sodium hypobromite, a oxidation reagent expressly suggested by SMITS.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to prepare oxidized inulin by the process of LEROY for use in preparing the composition of SMITS. In using the LEROY process, as suggested in SMITS, one of ordinary skill would reasonably expect the production of an oxidized product having the ratio of aldehyde and carboxyl groups recited in the claims.

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***Examiner's hours, phone & fax numbers***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh Maier whose telephone number is (703) 308-4525. The examiner can normally be reached on Tuesday, Wednesday, or Friday 7:00 to 3:30 (ET).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. James O. Wilson (703) 308-4624, may be contacted. The fax phone number for Group 1600, Art Unit 1623 is (703) 308-4556 or 305-3592.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 1600 receptionist whose telephone number is (703) 308-1235.

Visit the U.S. PTO's site on the World Wide Web at <http://www.uspto.gov>. This site contains lots of valuable information including the latest PTO fees, downloadable forms, basic search capabilities and much more.



Leigh C. Maier  
Patent Examiner  
February 21, 2003